

# 97%: An Inconvenient Truth About The Oft-Cited Polling Of Climate Scientists



Quora Contributor



(Photo by Rufus Cox/Getty Images)

*What are some widely cited studies in the news that are false? originally appeared on Quora: the place to gain and share knowledge, empowering people to learn from others and better understand the world.*

**Answer by Richard Muller, Professor of Physics at UC Berkeley, on Quora:**

What are some widely cited studies in the news that are false? That 97% of all climate scientists accept that climate change is real, large and a threat to the future of humanity. That 97% basically concur with the vast majority of claims

made by Vice President Al Gore in his Nobel Peace Prize winning film, *An Inconvenient Truth*.

The question asked in typical surveys is neither of those. It is this: “Do you believe that humans are affecting climate?” My answer would be yes. Humans are responsible for about a 1 degree Celsius rise in the average temperature in the last 100 years. So I would be included as one of the 97% who believe.

Yet the observed changes that are scientifically established, in my vast survey of the science, are confined to temperature rise and the resulting small (4-inch) rise in sea level. (The huge “sea level rise” seen in Florida is actually subsidence of the land mass, and is not related to global warming.) There is no significant change in the rate of storms, or of violent storms, including hurricanes and volcanoes. The temperature variability is not increasing. There is no scientifically significant increase in floods or droughts. Even the widely reported warming of Alaska (“the canary in the mine”) doesn’t match the pattern of carbon dioxide increase--it may have an explanation in terms of changes in the northern Pacific and Atlantic currents. Moreover, the standard climate models have done a very poor job of predicting the temperature rise in Antarctica, so we must be cautious about the danger of confirmation bias.

My friend Will Happer believes that humans do affect the climate, particularly in cities where concrete and energy use cause what is called the “urban heat island effect.” So he would be included in the 97% who believe that humans affect climate, even though he is usually included among the more intense skeptics of the IPCC. He also feels that humans cause a small amount of global warming (he isn’t convinced it is as large as 1 degree), but he does not think it is heading towards a disaster; he has concluded that the increase in carbon dioxide is good for food production, and has helped mitigate global hunger. Yet he would be included in the 97%.

The problem is not with the survey, which asked a very general question. The problem is that many writers (and scientists!) look at that number and mischaracterize it. The 97% number is typically interpreted to mean that 97% accept the conclusions presented in *An Inconvenient Truth* by former Vice President Al Gore. That’s certainly not true; even many scientists who are deeply concerned by the small global warming (such as me) reject over 70% of the claims

made by Mr. Gore in that movie (as did a judge in the UK; see the following link: [Gore climate film's nine "errors"](#)).

The pollsters aren't to blame. Well, some of them are; they too can do a good poll and then misrepresent what it means. The real problem is that many people who fear global warming (include me) feel that it is necessary to exaggerate the meaning of the polls in order to get action from the public (don't include me).

There is another way to misrepresent the results of the polls. Yes, 97% of those polled believe that there is human caused climate change. How did they reach that decision? Was it based on a careful reading of the IPCC report? Was it based on their knowledge of the potential systematic uncertainties inherent in the data? Or was it based on their fear that opponents to action are anti-science, so we scientists have to get together and support each other. There is a real danger in people with Ph.D.s joining a consensus that they haven't vetted professionally.

I like to ask scientists who "believe" in global warming what they think of the data. Do they believe hurricanes are increasing? Almost never do I get the answer "Yes, I looked at that, and they are." Of course they don't say that, because if they did I would show them the actual data! Do they say, "I've looked at the temperature record, and I agree that the variability is going up"? No. Sometimes they will say, "There was a paper by Jim Hansen that showed the variability was increasing." To which I reply, "I've written to Jim Hansen about that paper, and he agrees with me that it shows no such thing. He even expressed surprise that his paper has been so misinterpreted."

A really good question would be: "Have you studied climate change enough that you would put your scientific credentials on the line that most of what is said in *An Inconvenient Truth* is based on accurate scientific results?" My guess is that a large majority of the climate scientists would answer *no* to that question, and the true percentage of scientists who support the statement I made in the opening paragraph of this comment, that true percentage would be under 30%. That is an unscientific guesstimate, based on my experience in asking many scientists about the claims of Al Gore.

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